

## When Smoke Ran Like Water: Tales of Environmental Deception and the Battle Against Pollution

Devra Davis

New York: Basic Books, 2002. 316 pp.

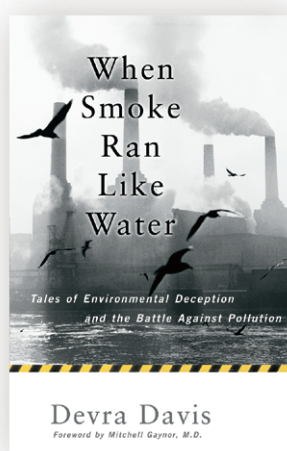
ISBN: 0-465-01521-2, US\$26.00/Can\$39.50/£18.99.

Devra Davis argues that industry has blocked, delayed, and otherwise obfuscated public health policies and public health actions for preventing disease and death caused by air pollution. Eschewing a balanced review and analysis of all air pollution issues, Davis instead aims to raise our awareness that air pollution has been and still is a significant public health problem and that the solutions do not come easily or without constant vigilance. She uses case examples to contend that some industries, notably the automobile industry, when confronted with pressure to reduce air emissions, characteristically and short-sightedly react by protecting their economic interests, by attacking scientists whose data question the safety of their products, and by exerting tremendous political pressure on policy makers. These cases are compelling and may persuade you that some industries have needlessly placed millions at risk for preventable diseases. However, the industry point of view is not adequately represented in this book, nor is the fact that many companies have taken positive steps to act responsibly in the use and handling of their products.

Davis uses significant cases to describe clearly the limitations of epidemiology in lay terms, emphasizing the need for accurate counting and exposure assessment—a theme that weaves throughout the book. Davis argues for making public health-oriented decisions in the face of uncertainty—supporting the precautionary principle: She says that “the perfect must forever remain the enemy of the good.” Another pattern in the book: public health officials, who do not always fare well, opposed by heroes who fought for clean air. One early hero was John Evelyn, who in 1661 concluded that coal smoke endangers health. His work and its rejection by those in power are for Davis typical of later environmental struggles.

The book's backdrop is provided by the Pennsylvania town of Donora, which in the early to mid-20th century was dominated by a large iron mill. On 26 October 1948, a powerful air inversion covered Donora for several days accompanied by a smoke-filled fog that enveloped the town. People got sick, yet the mill remained open, the big football game was played, and 19 people died over three days; hundreds became ill and never fully recovered. Public health agencies did not blame the mill despite geographic proximity of those afflicted. A strangely similar catastrophe occurred in Liège, Belgium, in 1930. And discussing the London fogs of the 1950s, Davis argues that this ongoing disaster, which killed thousands and made many more sick and/or disabled, could have been prevented had public health agencies realized that air pollution was the cause.

Davis attacks the Ethyl Corporation for putting lead in gasoline and keeping it there for 60 years despite growing scientific evidence that lead is a potent neurotoxicant. Ethyl argued that lead was safe in small



amounts, that if they were forced to remove lead from gas cars wouldn't run right, and that its removal would devastate the industry. The heroes here were Mary Amdur for work with animal models and Herbert Needleman for work on neurotoxicity of lead in children. The harassment of these scientists by industry is discussed in detail.

Several chapters address the air pollution controversies that led to the formation of the U.S. EPA by the Nixon Administration and passage and implementation of the Clean Air Act in 1970 and that established California as a leader in regulating air pollution. The auto-

mobile industry is portrayed as profit-driven, public-health-insensitive, litigation-happy, and unethical bullies who at every turn claimed impending bankruptcy. Although some charges may be accurate, the industry point of view is given short shrift here.

One of the later chapters describes Davis's perspective on science/policy issues relevant to the ozone hole in Earth's atmosphere with the attendant industry villains and public health heroes. The villains were the Halogenated Solvents Industrial Alliance and the Chemical Manufacturers Association; the heroes were Mario Molina and F. Sherwood Rowland, who in 1974 predicted that continued use of CFCs would create the now famous hole in the ozone layer. The 20-year process that followed makes for interesting reading and allows Davis to validate the wisdom of the precautionary principle. Molina and Rowland later won the Nobel Prize.

Although chapters on the endocrine disruptor debate deal with environmental causes of breast cancer, male fertility, and science/policy controversies, they don't add much to Theo Colburn's *Our Stolen Future* (1996), also written from an environmental advocacy position. These sections may detract from Davis's main theme of air pollution and preventable disease. Nevertheless, this exceptionally well-written book is excellent environmental literature. It captures both emotions and interest and it will undoubtedly spark debate over how science should be used in environmental and public health policy decisions.

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